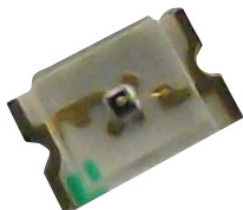


LED Lamps

SMD Display



Specifications

Dice Material	: GaAlAs
Peak Wave Length	: 660nm
Emitted Colour	: Super Red
Viewing Angle	: 120°
Epoxy Colour	: Water Clear
IV	: 5.1 mcd
Package Size	: 2mm × 1.25mm × 0.8mm, SMD LED

Electrical/Optical characteristics at T_A = 25°C

Parameter	Symbol	Min.	Typ	Max.	Unit	Test
Luminous Intensity	IV	2.2	5.1	9	mcd	IF = 5mA
Viewing Angle	2θ½		120		deg	
Peak Emission Wavelength	λp		660		nm	
Dominant Wavelength	λD	632	643	660	nm	
Spectral Line Half-Width	Δλ		20		nm	
Forward Voltage	VF	1.6	1.7	1.8	V	
Power Dissipation	Pd			80	mW	
Peak Forward Current (Duty1/10 @ 1kHz)	IF (Peak)			100	mA	
Recommended Operating Current	IF (Rec)		20		mA	

Absolute Maximum Ratings : (T_A = 25°C)

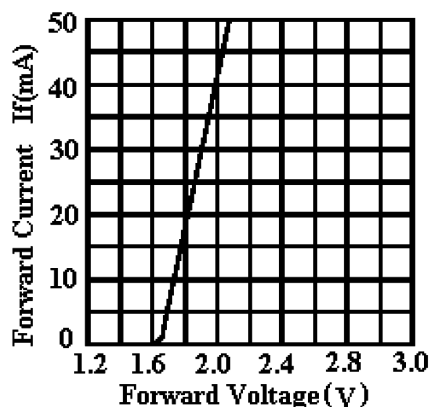
Reverse Voltage	: 5 Volt
Reverse Current	: 10μA (V _R = 5V)
Operating Temperature Range	: -40°C to +85°C
Storage Temperature Range	: -40°C to +100°C
Lead Soldering Temperature Range {1.6mm (1/16 inch) from body}	: 260°C For 5 Seconds

Reliability test For LED Lamps

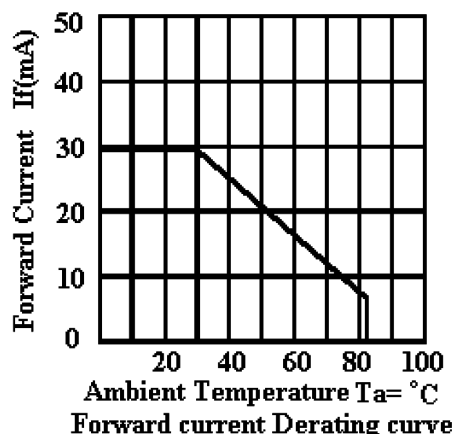
Item	Test Conditions	Test Time/Cycle	Sample Size	Ac/Re
DC Operating Life	Temperature : 25°C IF : 20mA	1,000 Hrs.	20 Pcs.	0/1
High Temperature High Humidity	Temperature : 85°C 85%RH			
High Temperature Storage	Temperature : 100°C			
Low Temperature Storage	Temperature : -40°C			
Temperature Cycling	85°C~ 25°C~-35°C 15min~ 5min~ 15min	15 Cycles		
Thermal Shock	85°C~ 25°C~-10°C 5min~ 10sec ~ 5min			
Solder Heat	Temperature : 260°C ±5°C	10 Sec.		

Typical Electro-Optical Characteristics Curves

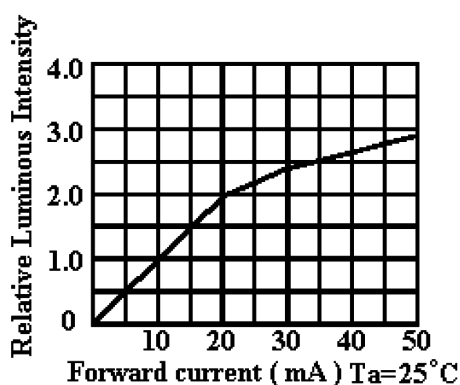
Super Red (GaAlAs) $\lambda_P=660\text{nm}$



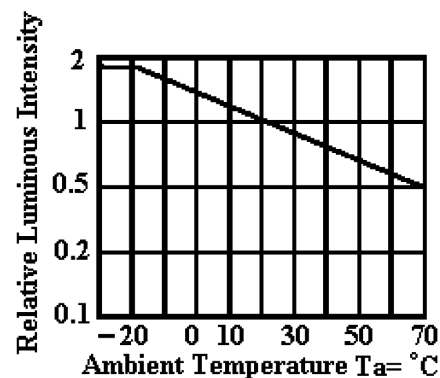
Forward current vs. Forward Voltage



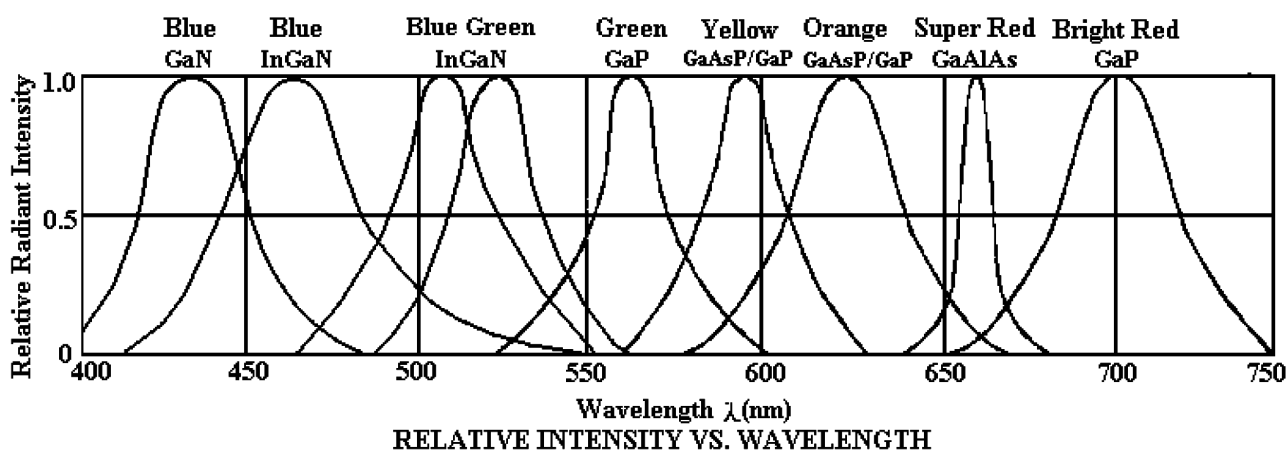
Forward current Derating curve



Luminous Intensity vs. Forward current



Luminous Intensity vs. Ambient Temperature



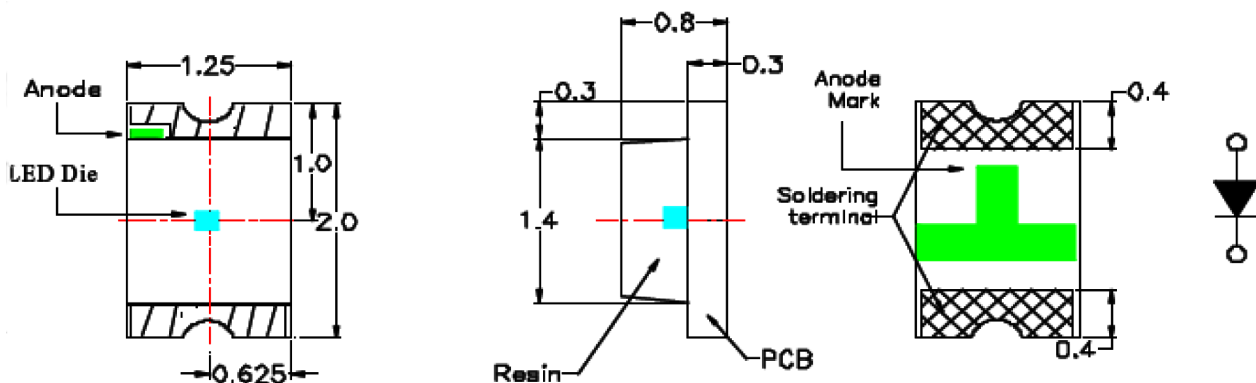
RELATIVE INTENSITY VS. WAVELENGTH

LED Lamps

SMD Display



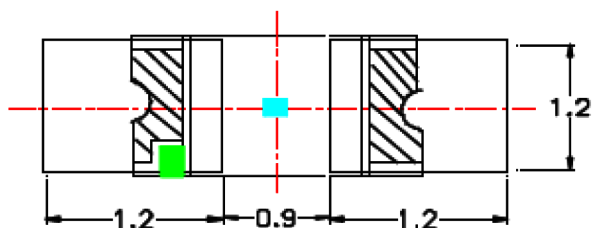
Dimensions:



1. Soldering terminal may shift in x, y direction.

Dimensions : Millimetres
Tolerance : $\pm 0.1\text{mm}$

Recommended Soldering Pad Dimensions:



Dimensions : Millimetres

Luminous Intensity BIN Limits

Test Condition : @ 5mA		
BIN Code	Ivmin (mcd)	Ivmax (mcd)
C2	2.2	3.6
D1	3.6	5.1
D2	5.1	7.2
E1	7.2	9

Dominant Wavelength BIN Limits

Test Condition : @ 5mA		
BIN Code	λ_{dmin} (nm)	λ_{dmax} (nm)
1	632	660

LED Lamps

SMD Display



Forward Voltage BIN Limits

Test Condition : @ 5mA		
BIN Code	V _{fmin} (V)	V _{fmax} (V)
1	1.5	1.6
2	1.6	1.7
3	1.7	1.8

Part Number Table

Description	Part Number
LED, Red, SMD, 1.25mm × 1.4mm, 20mA, 1.85V, 643 nm	MCL-S270SRC

Important Notice : This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell Limited 2016.